

Title (en)  
METHOD FOR CALIBRATING TRANSMITTER-TO-RECEIVER RELATIVE PHASE IN MILLIMETER WAVE BEAMFORMING SYSTEM AND ASSOCIATED MILLIMETER WAVE ANTENNA MODULE

Title (de)  
VERFAHREN ZUM KALIBRIEREN EINER RELATIVEN PHASE ZWISCHEN SENDER UND EMPFÄNGER IN EINEM MILLIMETERWELLENSTRAHLFORMUNGSSYSTEM UND ZUGEHÖRIGES MILLIMETERWELLENANTENNENMODUL

Title (fr)  
PROCÉDÉ D'ÉTALONNAGE DE LA PHASE RELATIVE ENTRE ÉMETTEUR ET RÉCEPTEUR DANS UN SYSTÈME DE FORMATION DE FAISCEAU À ONDES MILLIMÉTRIQUES ET MODULE D'ANTENNE À ONDES MILLIMÉTRIQUES ASSOCIÉ

Publication  
**EP 3985888 A1 20220420 (EN)**

Application  
**EP 21202824 A 20211015**

Priority  
• US 202063093327 P 20201019  
• US 202117500910 A 20211013

Abstract (en)  
A method for calibrating a transmitter-to-receiver (T2R) relative phase in millimeter wave (mmWave) beamforming system includes: transmitting a first calibrated signal to a second antenna of the mmWave beamforming system through a first antenna of the mmWave beamforming system according to a first transmitter (TX) input signal; receiving the first calibrated signal through the second antenna, and obtaining a first loopback receiver (RX) signal according to the first calibrated signal received by the second antenna; transmitting a second calibrated signal to the first antenna through the second antenna according to a second TX input signal; receiving the second calibrated signal through the first antenna, and obtaining a second loopback RX signal according to the second calibrated signal received by the first antenna; and calibrating the T2R relative phase according to a phase difference between the first and second loopback RX signals.

IPC 8 full level  
**H04B 17/12** (2015.01)

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**H01Q 1/241** (2013.01 - CN); **H01Q 3/005** (2013.01 - CN); **H01Q 3/34** (2013.01 - CN); **H01Q 21/00** (2013.01 - CN); **H04B 7/043** (2013.01 - US); **H04B 17/12** (2015.01 - EP US); **H04B 17/16** (2015.01 - US); **H04B 17/24** (2015.01 - US)

Citation (applicant)  
US 202762630933 P

Citation (search report)  
• [I] US 2015118970 A1 20150430 - THOUKYDIDES ALEXANDER [GB], et al  
• [A] EP 3664322 A1 20200610 - SAMSUNG ELECTRONICS CO LTD [KR]

Cited by  
US11764882B1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
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DOCDB simple family (publication)  
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